CLAIM AMENDMENTS

Claim 1 (cancelled)

Claim 2 (currently amended)

--2. The method as defined in Claim 34 wherein the compound employed has the structure

$$R^{2b}$$
 R^{2a}
 R^{2a}
 R^{2b}
 R^{2a}
 R

Claim 3 (cancelled)

Claim 4 (previously amended)

4. The method as defined in Claim 34 wherein the compound employed has the structure

$$(CH_2)_x$$
 $(CH_2)_m$
 $(CH_2)_m$
 $(CH_2)_n$
 $(CH_2)_m$
 $(CH_2)_n$
 $(CH_2)_n$

Claim 5 (previously amended)

--5. The compound as defined in Claim 34 where in the compound employed $(CH_2)x$ is alkylene, alkenylene, allenyl, or alkynylene.--

Claims 6 to 9 (cancelled)

Claim 10 (currently amended)

-10. The method as defined in Claim 34 where in the compound employed (CH₂)_x is CH₂, CH₃ CH₃ (CH₂)_a, or CH₂ , (CH₂)_m is CH₂, or CH₂ (where R_a is alkyl or alkenyl), (CH₂)_n is CH₂, R¹ is lower alkyl, R² is H, R^{2a} is H, R⁴ is H, and R³ is arylalkyloxycarbonyl, aryloxycarbonyl, haloaryl-oxycarbonyl, alkoxyaryloxycarbonyl, alkylaryloxycarbonyl, arylalkenyloxycarbonyl, cycloalkylaryloxycarbonyl, eyeloalkyloxyaryloxycarbonyl, arylalkenyloxycarbonyl, arylalkenyloxycarbonyl, arylalkenyloxycarbonyl, arylalkenyloxycarbonyl, arylalkenyloxycarbonyl, arylalkenyloxycarbonyl, or polyhaloalkylaryloxycarbonyl, which may be optionally substituted. -

Claims 11 to 13 (cancelled)

Claim 14 (previously amended)

--14. The method as defined in Claim 34 where the compound employed has the structure

where
$$(CH_2)_n$$
 is CH_2 or $-CH_2$.

Claim 15 (cancelled)

Claim 16 (currently amended)

--16. The method as defined in Claim 34 wherein the compound employed has the structure

$$\begin{pmatrix}
Ph & & & \\
O & & & \\
CH_3 & & & \\
\end{pmatrix}$$

$$\begin{pmatrix}
Ph & & & \\
O & & & \\
CH_3 & & & \\
\end{pmatrix}$$

$$\begin{pmatrix}
Ph & & & \\
O & & & \\
\end{pmatrix}$$

$$\begin{pmatrix}
Ph & & & \\
O & & & \\
\end{pmatrix}$$

$$\begin{pmatrix}
Ph & & & \\
O & & & \\
\end{pmatrix}$$

$$\begin{pmatrix}
Ph & & & \\
O & & & \\
CH_3 & & & \\
\end{pmatrix}$$

$$\begin{array}{c|c} Ph & & & \\ \hline \\ O & & \\ \hline \\ CH_3 & & \\ \end{array}$$

$$\begin{array}{c} Ph \\ \longrightarrow \\ CH_3 \end{array}$$

$$\begin{array}{c} Ph \\ CH_3 \end{array} \\ \begin{array}{c} O \\ CO_2H \end{array} \\ \end{array}$$

$$\begin{array}{c|c} Ph & & & \\ \hline \\ O & & \\ \hline \\ CH_3 & & \\ \hline \\ OCHF_2 \end{array},$$

Ph
$$\rightarrow$$
 N \rightarrow Co₂H \rightarrow Co₂H \rightarrow N \rightarrow Co₂H \rightarrow N \rightarrow Co₂H \rightarrow N \rightarrow Co₂H \rightarrow N \rightarrow Co₂H \rightarrow Co₂H \rightarrow N \rightarrow Co₂H \rightarrow Co₂H \rightarrow Co₂H \rightarrow Co₂H \rightarrow Co₂H \rightarrow Co₂H \rightarrow N \rightarrow Co₂H \rightarrow C

$$\begin{array}{c} \mathsf{Ph} \\ \mathsf{O} \\ \mathsf{CH}_3 \end{array} \\ \begin{array}{c} \mathsf{O} \\ \mathsf{O} \\ \mathsf{CO}_2\mathsf{H} \end{array} \\ \begin{array}{c} \mathsf{O} \\ \mathsf{O} \\ \mathsf{CH}_3 \end{array} \\ \begin{array}{c} \mathsf{O} \\ \mathsf{O} \\ \mathsf{CH}_3 \end{array} \\ \begin{array}{c} \mathsf{O} \\ \mathsf{O} \\ \mathsf{O} \\ \mathsf{CO}_2\mathsf{H} \end{array} \\ \begin{array}{c} \mathsf{O} \\ \mathsf{O} \\$$

Ph
$$CCO_2H$$
 , where $R^{3e} = 1$, CCO_2H , CCO_2H , $CCOO_2H$, $CCOO_2H$

$$\begin{array}{c|c} Ph & & & \\ \hline \\ O & & \\ \hline \\ CH_3 & & \\ \hline \\ CO_2H & \\ \hline \\ \\ CO_2H & \\ \hline \\ \\ \\ CH_3 & \\ \hline \\ \\ \\ \\ \end{array}$$

$$\begin{array}{c} R^3 \\ N \\ CO_2H \\ CH_3 \end{array}$$
 , where $R^3=$

where $R^3 =$

$$\begin{array}{c}
Ph \\
O \\
O \\
CH_3
\end{array}$$

$$\begin{array}{c}
R^3 \\
O \\
O \\
CO_2H
\end{array}$$

$$\begin{array}{c}
\mathsf{Ph} \\
\mathsf{O} \\
\mathsf{O}
\end{array}$$

 H_3 , where $R^3 =$

Ph
$$CO_2H$$
 CO_2H R^{3h} , where R^{3h} =

$$\begin{array}{c} R^{3h} \\ O \\ O \\ CH_3 \end{array}$$
, where $R^{3h} =$

$$\frac{\mathsf{Ph} - \mathsf{O} - \mathsf{CH}_3}{\mathsf{N} - \mathsf{O}} - \frac{\mathsf{N} - \mathsf{CO}_2\mathsf{H}}{\mathsf{N} - \mathsf{O}} - \frac{\mathsf{CH}_3}{\mathsf{N} - \mathsf{CO}_2\mathsf{H}} + \frac{\mathsf{N} - \mathsf{O}}{\mathsf{N} - \mathsf{CO}_2\mathsf{H}}}{\mathsf{N} - \mathsf{CO}_2\mathsf{H}}$$

Ph
$$CH_3$$
 CO_2H CH_3 , where $R^a = (\pm)-Me$, (\pm) n-Bu ,

Ph
$$CH_3$$
 CO_2H CO

$$\begin{array}{c} \text{OCH}_3 \\ \text{Ph} \\ \text{N} \\ \text{CH}_3 \\ \text{CO}_2\text{H} \end{array}, \begin{array}{c} \text{CH}_3 \\ \text{Ph} \\ \text{OCH}_3 \end{array}, \begin{array}{c} \text{CH}_3 \\ \text{N} \\ \text{CO}_2\text{H} \\ \text{OCH}_3 \end{array}, \begin{array}{c} \text{CH}_3 \\ \text{N} \\ \text{CO}_2\text{H} \\ \text{OCH}_3 \end{array}, \\ (\pm) \end{array}$$

$$\begin{array}{c|c} CH_3 & CO_2H \\ \hline \\ D & O \\ \hline \\ \end{array}$$

$$Ph \xrightarrow{O \leftarrow CH_3} O \xrightarrow{N \leftarrow CO_2H} Ph \xrightarrow{O \leftarrow CH_3} O \xrightarrow{N \leftarrow CO_2H} O \xrightarrow{O \leftarrow CH_3} O \xrightarrow{O \leftarrow CH$$

$$\begin{array}{c} \text{CH}_{3} \\ \text{Ph} \\ \text{N} \\ \text{OCH}_{3} \\ \text{Ph} \\ \text{OCH}_{3} \\ \text{OCH}_{4} \\ \text{OCH}_{4} \\ \text{OCH}_{4} \\ \text{OCH}_{5} \\ \text$$

$$\begin{array}{c} CH_{3} \\ H_{3}CO \longrightarrow \begin{pmatrix} CH_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CH_{3} \\ CO_{2}H_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CH_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CO_{2}H_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CH_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CO_{2}H_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CH_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CH_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CH_{3} \\ N \end{pmatrix} \longrightarrow \begin{pmatrix} CO_{2}H_{3} \\ N$$

Claim 17 (currently amended)

--17. (Amended) The method as defined in Claim 34 wherein the compound employed has the structure

$$CH_3$$
 CH_3
 CH_3
 CH_3
 CH_3

$$\mathsf{Ph} \overset{\mathsf{O} \longrightarrow \mathsf{CH}_3}{\underset{\mathsf{CO}_2\mathsf{H}}{\mathsf{H}}} \overset{\mathsf{O} \longrightarrow \mathsf{O}}{\underset{\mathsf{CO}_2\mathsf{H}}{\mathsf{H}}} \overset{\mathsf{O}}{\underset{\mathsf{CO}_2\mathsf{H}}{\mathsf{H}}}$$

$$\begin{array}{c|c} Ph & O & O \\ \hline O & N & CO_2H \\ \hline CH_3 & \end{array}$$

$$Ph \xrightarrow{O \longrightarrow CH_3} O \xrightarrow{O \longrightarrow O} OCH_3$$

$$\mathsf{Ph} \overset{\mathsf{O} \longrightarrow \mathsf{CH}_3}{\underset{\mathsf{CO}_2 \mathsf{H}}{\mathsf{H}_3}} = \mathsf{Ph} \overset{\mathsf{O} \longrightarrow \mathsf{N}}{\underset{\mathsf{CO}_2 \mathsf{H}}{\mathsf{H}_3}}$$

$$\begin{array}{c} Ph \\ O \\ O \\ CH_3 \end{array}$$

$$Ph \xrightarrow{O \quad CH_3} O \xrightarrow{O \quad O} O \xrightarrow{O \quad CO_2H} OCF_3$$

$$\begin{array}{c} Ph \\ O \\ CH_3 \end{array}$$

Claims 18 and 19 (cancelled)

Claim 20 (currently amended)

--20. The method as defined in Claim 34 wherein the compound employed has the structure

$$\begin{array}{c|c} Ph & O & O \\ \hline O & N & CO_2H \\ \hline CH_3 & \end{array}$$

$$\begin{array}{c} Ph \\ O \\ O \\ CH_3 \end{array}$$

$$\begin{array}{c} \mathsf{Ph} \\ \mathsf{O} \\ \mathsf{CH}_3 \end{array} \qquad \begin{array}{c} \mathsf{O} \\ \mathsf{O} \\ \mathsf{N} \\ \mathsf{CO}_2\mathsf{H} \end{array}$$

$$\begin{array}{c|c} & & & & \\ & & & & \\ \text{Ph} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ &$$

$$Ph \xrightarrow{\text{N} \quad CO_2H} O \xrightarrow{\text{OCH}_3} O \xrightarrow{\text{OCH}_3}$$

$$\begin{array}{c|c} & & & & \\ & & & \\ \text{Ph} & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$$

$$\begin{array}{c|c} CH_3 & CO_2H \\ \hline \\ N & CO_2H \\ \hline \\ OCH_3 & OCH_3 \\ \hline \end{array}$$

$$Ph \xrightarrow{O \xrightarrow{CH_3}} O \xrightarrow{N \xrightarrow{CO_2H}} Ph \xrightarrow{O \xrightarrow{CH_3}} O$$

$$\begin{array}{c} \overset{\overset{\longleftarrow}{C}}{\stackrel{\longleftarrow}{C}} H_3 \\ \overset{\longleftarrow}{\stackrel{\longleftarrow}{C}} N \overset{\longleftarrow}{\stackrel{\longleftarrow}{C}} CO_2H \\ \\ Ph \overset{\longleftarrow}{\stackrel{\longleftarrow}{O}} CH_3 \\ \\ Ph \overset{\longleftarrow}{\stackrel{\longleftarrow}{O}} CO_2H \\ \\ CH_3 \\ \\ CH_$$

$$Ar = CI \longrightarrow GCH_3 \qquad F_3C \longrightarrow F_3C$$

$$\begin{array}{c} \mathsf{Ar} \\ \mathsf{PN} \\ \mathsf{CH}_3 \\ \mathsf{CH}_3 \end{array}$$

$$Ar = CI \longrightarrow \bigcap_{i=1}^{OCH_3} \bigcap_{i=1}^{OCH_3} \bigcap_{i=1}^{F_3C} \bigcap_{i=1}$$

Claim 21 (previously amended)

--21. The method as defined in Claim 55 wherein the compound employed has the structure

Claim 22 (previously amended)

--22. The method as defined in Claim 55 wherein the compound employed has the structure

or

Claims 23 to 25 (cancelled)

Claim 26 (previously amended)

--26. The method as defined in Claim 55 wherein the compound employed has the structure

Claim 27 (previously amended)

--27. The method as defined in Claim 55 wherein the compound employed has the structure

Claim 28 (previously amended)

--28. The method as defined in Claim 55 wherein the compound employed has the structure

Claim 29 (cancelled)

Claim 30 (previously amended)

--30. The method as defined in Claim 55 wherein the compound employed has the structure

Claim 31 (previously amended)

--31. The method as defined in Claim 55 wherein the compound employed has the structure

Claim 32 (previously amended)

--32. The method as defined in Claim 55 wherein the compound employed has the structure

Claim 33 (cancelled)

Claim 34 (currently amended)

--34. A method for lowering blood glucose levels or for treating diabetes, or for treating an early malignant disease, a malignant disease, a malignant disease, or a dysplastic disease, which comprises administering to a patient in need of treatment a therapeutically effective amount of a compound which has the structure

$$\begin{array}{c|c}
R^{2a} & R^{2b} \\
\hline
Q & R^{2c} & R^{2c}
\end{array}$$

$$\begin{array}{c|c}
R^{2a} & R^{2c} & R^{3} \\
\hline
(CH_2)_x & R^{2c} & R^{3}
\end{array}$$

$$\begin{array}{c|c}
CH_2)_n & CH_2)_n
\end{array}$$

wherein x is 1,2, 3 or 4; m is 1 or 2; n is 1 or 2;

Q is C or N;

A is O or S;

Z is O or a bond;

R¹ is H or lower alkyl;

X is CH;

R² is H, or alkyl, alkoxy, halogen, amino or substituted amino;

R^{2a}, R^{2b} and R^{2c} are the same or different and are selected from H₇ or alkyl, alkoxy, halogen, amino or substituted amino;

R³ is aryloxycarbonyl, alkyloxycarbonyl, alkynyloxycarbonyl, alkenyloxycarbonyl, alkyl(halo)aryloxycarbonyl, alkyloxy(halo)aryloxycarbonyl, cycloalkylaryloxycarbonyl, eycloalkylaryloxycarbonyl, alkylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylsulfonyl, alkoxycarbonylamino, aryloxycarbonyl, eycloheteroalkyloxycarbonyl, heteroarylalkenyl, hydroxyalkyl, alkoxy, alkoxyaryloxycarbonyl, arylalkyloxycarbonyl, alkylaryloxycarbonyl, alkynyloxycarbonyl, haloalkoxyaryloxycarbonyl, alkoxycarbonyl, alkoxyaryloxycarbonyl, aryloxyaryloxycarbonyl, aryloxyarylalkyloxycarbonyl, aryloxyarylalkyloxycarbonyl, arylalkyloxycarbonyl, arylalkylsulfonyl, arylthiocarbonyl, arylalkenylsulfonyl, heteroarylalkyloxycarbonyl, heteroarylalkoxycarbonyl, heteroarylalkyl, arylalkenylarylalkyl, arylalkoxycarbonylheteroarylalkyl, heteroarylalkyl, arylalkenylarylalkyl, arylalkoxycarbonyl;

Y is CO_2R^4 where R^4 is H or alkyl, or a prodrug ester or Y is a C-linked 1-tetrazole, a phosphinic acid of the structure $P(O)(OR^{4a})R^5$ where R^{4a} is H or a prodrug ester, R^5 is alkyl or aryl or a phosphonic acid of the structure $P(O)(OR^{4a})_2$ where R^{4a} is H or a prodrug ester;

or stereoisomers thereof, <u>a</u> prodrug <u>esters</u> <u>ester</u> thereof, and <u>a</u> pharmaceutically acceptable <u>salts</u> <u>salt</u> thereof. –

Claims 35 to 54 (cancelled)

Claim 55 (previously added)

55. A method for lowering blood glucose levels or for treating diabetes, which comprises administering to a patient in need of treatment a therapeutically effective amount of a compound which has the structure

where R1 is alkyl,

 $(CH_2)_m$ is CH_2 or CH_2 and R^3 is aryloxycarbonyl or alkoxyaryloxycarbonyl.

Claim 56 (previously added)

56. The method as defined in Claim 55 where in the compound employed $(CH_2)_m$ is CH_2 .

Claims 57 and 58 (cancelled)